IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of	:	Customer Number: 20277
	:	
Ken MASHITANI, et al.	:	Confirmation Number: 9003
	:	
Application No.: 10/553,390	:	Tech Center Art Unit: 2625
	:	
Filed: October 17, 2005	:	Examiner: Fan Zhang
	:	

For: THREE-DIMENSIONALLY VIEWED IMAGE PROVIDING METHOD, AND THREE-DIMENSIONAL IMAGE DISPLAY APPARATUS

APPEAL BRIEF

Mail Stop Appeal Brief
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Appeal Brief is submitted in support of the Notice of Appeal filed September 2, 2011,

wherein Appellants appeal from the Primary Examiner's rejection of claims 4, 6-9, 14, 15, and 21-27.

Real Party In Interest

This application is assigned to Sanyo Electric Co., Ltd., Sharp Kabushiki Kaisha, and Sony

Corporation by assignment recorded on December 15, 2006, at Reel 018838, Frame 0357.

Related Appeals and Interferences

Appellants are unaware of any related Appeal or Interference.

Status of Claims

1. Claims canceled: Claims 1-3, 5, 10-13, and 16-20

2. Claims withdrawn from consideration, but not canceled: None

3. Claims pending: Claims 4, 6-9, 14, 15, and 21-27

4. Claims allowed: None

5. Claims rejected: Claims 4, 6-9, 14, 15, and 21-27

6. Claims on appeal: Claims 4, 6-9, 14, 15, and 21-27

Status of Amendments

An Amendment is filed concurrently with this Appeal Brief, subsequent to the issuance of the Final Office Action dated May 2, 2011. As claim 22 is amended only to correct a mirror error, it is assumed that this Amendment will have been entered.

Summary of Claimed Subject Matter

The subject matter of the present application intends to allow a creator of stereoscopic vision-use images (*e.g.*, left eye and right eye images) to control a receiving side of the images so that a process intended by the creator can be performed on the images by, for example, a three-dimensional display apparatus which is at a receiving side.

Independent claim 22 recites a stereoscopic vision-use image providing method for providing two dimensional image data including a plurality of two-dimensional images of different viewpoints (*see*, e.g., left and right images in Fig. 1) for use as stereoscopic vision-use images (*see*, e.g., page 10, line 17 to page 11, line 25 of the specification), the method comprising the steps of:

providing, by a computer, the two-dimensional image data (*see*, e.g., left and right images in Fig. 1; and page 10, line 17 to page 11, line 25 of the specification); and

attaching, by the computer, information to the two-dimensional image data (*see*, e.g., Fig. 2; and page 12, lines 1-4, and page 13, lines 8-21 of the specification), the attached information including:

viewpoint-number information allotted to each two-dimensional image (*see*, e.g., page 13, lines 2-6 of the specification), or information for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for two-dimensional image areas corresponding to the respective two-dimensional images (*see*, e.g., page 40, lines 1-10 of the specification), selecting two or more of the two-dimensional images being made by specifying corresponding viewpoint-number information (*see*, e.g., page 13, lines 6-7);

order-of-priority information indicating an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information (*see*, e.g., page 14, line 5 to page 15, line 6; and page 17, lines 8-12 of the specification); and

display-manner information indicating in what manner the selected two-dimensional images are to be displayed (*see*, e.g., page 15, line 7 to page 16, line 8 of the specification), wherein

the order-of-priority information specifies order of the selected two or more two-dimensional images (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification).

Independent claim 23 recites a stereoscopic vision-use image providing method for providing two-dimensional image data (*see*, e.g., left and right images in Fig. 1) including a plurality of two-dimensional images of different viewpoints for use as stereoscopic vision-use images data (*see*, e.g., page 10, line 17 to page 11, line 25 of the specification), the method comprising the steps of:

providing, by a computer, the two-dimensional image data (*see*, e.g., left and right images in Fig. 1; and page 10, line 17 to page 11, line 25 of the specification); and

attaching, by the computer, information to the two-dimensional image data (*see*, e.g., Fig. 2; and page 12, lines 1-4, and page 13, lines 8-21 of the specification), the attached information including:

viewpoint-number information allotted to each two-dimensional image (*see*, e.g., page 13, lines 2-6 of the specification), or information for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for two-dimensional image areas corresponding to the respective two-dimensional images (*see*, e.g., page 40, lines 1-10 of the specification), selecting two or more of the two-dimensional images being made by specifying corresponding viewpoint-number information (*see*, e.g., page 13, lines 6-7), and the selected two or more of the two dimensional images being arranged in order of priority which is determined by order of specifying the viewpoint information in the attached information (*see*, e.g., page 14, lines 5-12 of the specification); and

display-manner information indicating in what manner the selected two-dimensional images are to be displayed (*see*, e.g., page 15, line 7 to page 16, line 8 of the specification), wherein the specified viewpoint-number information is arranged in order of priority to specify order of the selected two or more two-dimensional images (*see*, e.g., page 14, lines 5-12 of the specification).

Independent claim 24 recites a stereoscopic image display apparatus (*see*, e.g., receiving-side device 2 in Fig. 1) for creating stereoscopic vision-use images (*see*, e.g., left and right images in Fig. 1) based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints (*see*, e.g., page 10, line 17 to page 11, line 25 of the specification), comprising:

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means (*see*, e.g., CPU 22 in Fig. 1) for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image (*see*, e.g., page 30, lines 13-20 of the specification), selecting two-dimensional images being made by specifying corresponding viewpoint-number information (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), display-manner information indicating in what manner the selected two dimensional images are to be displayed (*see*, e.g., page 32, line 17 to page 34, line 23 of the specification), and order of alignment information specifying a direction of aligning the selected two dimensional images (*see*, e.g., Figs. 4-6, and page 40, line 11 to page 41, line 21 of the specification);

means (*see*, e.g., CPU 22 in Fig. 1) for selecting the specified two or more two-dimensional images according to an order-of-priority to be given to the selected two or more of the two-dimensional images (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification); and

means (*see*, e.g., monitor 2 and CPU 22 in Fig. 1) for displaying the selected two-dimensional images according to the display manner information and the alignment information (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification).

Independent claim 25 recites a stereoscopic image display apparatus (*see*, e.g., receiving-side device 2 in Fig. 1) for creating stereoscopic vision-use images (*see*, e.g., left and right images in Fig. 1) based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints (*see*, e.g., page 10, line 17 to page 11, line 25 of the specification), comprising:

means (*see*, e.g., CPU 22 in Fig. 1) for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image (*see*, e.g., page 30, lines 13-20 of the specification), selecting two-dimensional images being made by specifying

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corresponding view point-number information (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), order-of-priority information indicating an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the corresponding viewpoint-number information in the attached information (*see*, e.g., page 32, lines 9-15 of the specification), and display-manner information indicating in what manner the selected two dimensional images are to be displayed (*see*, e.g., page 32, line 17 to page 34, line 23 of the specification);

means (*see*, e.g., CPU 22 in Fig. 1) for selecting the specified two-dimensional images based on the order-of-priority information (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification); and

means (*see*, e.g., monitor 2 and CPU 22 in Fig. 1) for displaying the selected two-dimensional images according to the display manner information (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification), wherein

the order-of-priority information specifies order of the selected two or more two-dimensional images (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification).

Independent claim 26 recites a stereoscopic image display apparatus (*see*, e.g., receiving-side device 2 in Fig. 1) for creating stereoscopic vision-use images (*see*, e.g., left and right images in Fig. 1) based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints (*see*, e.g., page 10, line 17 to page 11, line 25 of the specification), comprising:

means (*see*, e.g., CPU 22 in Fig. 1) for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image (*see*, e.g., page 30, lines 13-20 of the specification), selecting two-dimensional images being made by specifying corresponding viewpoint-number information (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), order-of-priority information indicating an order-of-priority to be given to the selected

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two or more of the two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information (*see*, e.g., page 32, lines 9-15 of the specification), and purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used (*see*, e.g., page 37, line 21 to page 39, line 11 of the specification); and

means (*see*, e.g., CPU 22 in Fig. 1) for selecting the specified two-dimensional images based on the order-of-priority information (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), wherein

the order-of-priority information specifies order of the selected two or more two-dimensional image data (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification).

Independent claim 27 recites a stereoscopic image display apparatus (*see*, e.g., receiving-side device 2 in Fig. 1) for creating stereoscopic vision-use images (*see*, e.g., left and right images in Fig. 1) based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints (*see*, e.g., page 10, line 17 to page 11, line 25 of the specification), comprising:

means (*see*, e.g., CPU 22 in Fig. 1) for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image (*see*, e.g., page 30, lines 13-20 of the specification), selecting two-dimensional images being made by specifying corresponding viewpoint-number information (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used (*see*, e.g., page 37, line 21 to page 39, line 11 of the specification), and order of alignment information specifying a direction of aligning the selected two-dimensional images (*see*, e.g., Figs. 4-6, and page 40, line 11 to page 41, line 21 of the specification); and

means (*see*, e.g., CPU 22 in Fig. 1) for selecting the specified two-dimensional images according to an order-of-priority to be given to the selected two-dimensional images (*see*, e.g., page 30, line 21 to page 31, line 5 of the specification), the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information (*see*, e.g., page 14, line 5 to page 15, line 6 of the specification).

Grounds of Rejection To Be Reviewed By Appeal

Claims 4, 6-9, 14, 15, and 21-27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Takemoto et al. (U.S. Patent Application Publication No. 2003/0048354, hereinafter "Takemoto") in view of Imaizumi et al. (Japanese Patent Application Publication No. 2000-23198, hereinafter "Imaizumi"). *See* paragraph 3 of the Office Action dated May 2, 2011 ("Office Action").

Argument

Rejection of claims 4, 6-9, 14, 15, and 21-27 under 35 U.S.C. § 103(a) as being unpatentable over Takemoto in view of Imaizumi.

Legal precedent is well developed on the subject of obviousness in the application of a rejection under 35 U.S.C. §103. It is incumbent upon the Examiner to factually support a conclusion of obviousness. *In re Mayne*, 104 F.3d 1339, 41 USPQ2d 1451 (Fed. Cir. 1997*); In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The Examiner must provide a reason why one having ordinary skill in the art would have been led to modify a particular prior art reference in a particular manner to arrive at a particular claimed invention; *Ecolochem Inc. v. Southern California Edison, Co.* 227 F.3d 361, 56 USPQ2d 1065 (Fed. Cir. 2000); *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998). *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *Stratoflex, Inc. v.*

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Aeroquip Corp., 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967); *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007). Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006) cited with approval in *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 127 S. Ct. 1727 (2007).

Independent Claim 22

Claim 22 is an independent claim and reproduced as follows:

22. A stereoscopic vision-use image providing method for providing two dimensional image data including a plurality of two-dimensional images of different viewpoints for use as stereoscopic vision-use images, the method comprising the steps of:

providing, by a computer, the two-dimensional image data; and

attaching, by the computer, information to the two-dimensional image data, the attached information including:

viewpoint-number information allotted to each two-dimensional image, or information for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for two-dimensional image areas corresponding to the respective two-dimensional images, selecting two or more of the two-dimensional images being made by specifying corresponding viewpoint-number information;

order-of-priority information indicating an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information; and

display-manner information indicating in what manner the selected two-dimensional images are to be displayed, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional images.

Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic vision-use image providing method including all the recitations of independent claim 22.

Specifically, the applied combination of the references does not disclose, among other things, "order-of-priority information indicating an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information," as recited in claim 22.

In the statement of the rejection, the Examiner admitted that "Takemoto et al do not explicitly define order-of-priority information each viewpoint." However, the Examiner stated that Imaizumi teaches the missing feature of Takemoto, and concluded that it would have been obvious "to modify the teaching of Takemoto et al to assign ranking/priority orders to viewpoints and select the corresponding images based on the ranking number information in the header for the purpose of defining corresponding potential relationship among view points and properly organizing information for more efficient image/viewpoint identification and selection" *See* the paragraph bridging pages 5 and 6 of the Office Action.

The Examiner made a clear error in applying the teachings of Imaizumi to Takemoto. Takemoto teaches distributing images with information with respect to three-dimensional display processes. Imaizumi describes compressing and decompressing a plurality of two-dimensional images based on view point ranking. Appellants' position is that the combination of Imaizumi to Takemoto does not teach the above-cited recitations of claim 22 or the combination of the references is not proper.

In more detail, Takemoto in paragraph [0045] teaches that "a compressing unit... compresses the parallax image, and a transmitting unit which transmits a plurality of the compressed parallax images with different viewpoints to the terminal." As mentioned above, Imaizumi teaches compressing and decompressing images based on the view point ranking. If the teachings of Imaizumi were applied to Takemoto, **the ranking would be used for compressing and decompressing images**

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to be prepared by Takemoto. Thus, **the modified Takemoto's system does not teach using the order-of-priority information for displaying two-dimensional images**.

Accordingly, to arrive at the claimed subject matter, the combination of Takemoto and Imaizumi need to be further modified, i.e., Imaizumi's ranking is applied for displaying two-dimensional images. **Further modification of the combination of Takemoto and Imaizumi is required to make the combination of Takemoto and Imaizumi operable and to attempt to arrive at the claimed subject matter**. This results in a strong indication of a hindsight reconstruction of the claimed subject matter based on the use of Appellants' disclosure as a template.

It is noted that the order-of-priority information indicates order assigned to two-dimensional images to prioritize them in accordance with an intention of a creator who creates stereoscopic images (perceived by a viewer) based on those two-dimensional images.

Based on the foregoing, Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic vision-use image providing method including all the recitations of claim 22.

Dependent claims 4 and 6-9 are also patentably distinguishable over Takemoto and Imaizumi at least because each dependent claim includes all the recitations of the corresponding independent claim.

Appellants, therefore, respectfully solicit reversal of the clearly erroneous rejection of independent claim 22, as well as dependent claims 4 and 6-9, under 35 U.S.C. § 103(a) over the combination of Takemoto and Imaizumi.

Independent Claim 23

Claim 23 is an independent claim and reproduced as follows:

23. A stereoscopic vision-use image providing method for providing two-dimensional image data including a plurality of two-dimensional images of different viewpoints for use as stereoscopic vision-use images, the method comprising the steps of:

providing, by a computer, the two-dimensional image data; and

attaching, by the computer, information to the two-dimensional image data, the attached information including:

> viewpoint-number information allotted to each two-dimensional image, or information for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for two-dimensional image areas corresponding to the respective two-dimensional images, selecting two or more of the two-dimensional images being made by specifying corresponding viewpoint-number information, and the selected two or more of the two dimensional images being arranged in order of priority which is determined by order of specifying the viewpoint information in the attached information; and

> display-manner information indicating in what manner the selected two-dimensional images are to be displayed, wherein

the specified viewpoint-number information is arranged in order of priority to specify order of the selected two or more two-dimensional images.

Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a

stereoscopic vision-use image providing method including all the recitations of independent claim 23.

In the statement of the rejection, the Examiner stated that "[c]laim 23 (currently amended)

has been analyzed and rejected with regard to claim 22" (the first full paragraph on page 6 of the

Office Action) (emphasis added). Appellants respectfully disagree with the Examiner at least because

the following recitation of claim 23 are not included in claim 22: "the specified viewpoint-number

information is arranged in order of priority to specify order of the selected two or more two-

dimensional images."

It is apparent that Imaizumi does not teach, among other things, the above-cited recitation of

claim 23. For example, the recitation is exemplarily described in the paragraph bridging pages 14-15

of the specification which is reproduced below (emphasis added):

In the above example, as shown in FIG. 3, information in which the viewpoint-number information as information for selecting two or more two-dimensional images are arranged in order of priority is set as the attached information within the file header. In addition, in the example shown in FIG. 3, the viewpoint-number information as the information for selecting the two-dimensional images are (3,0) and (4,0). <u>In this case, (3,0) is written first, and (4,0) is written after that, which means that a first order of priority is given to (3,0), and a second order of priority is given to (4,0).</u> By doing so, when providing as data the plurality of two-dimensional images of different viewpoints as stereoscopic vision-use images, attached information composed of the viewpoint-number information allotted to each two-dimensional image data, and the information formed by arranging in order of priority the viewpoint-number information as the information for selecting two or more two-dimensional images, together with two-dimensional image data, is to be provided.

Imaizumi is silent on the recitation "the specified viewpoint-number information is arranged in order of priority to specify order of the selected two or more two-dimensional images." Accordingly, Imaizumi does not cure the deficiencies of Takemoto.

Based on the foregoing, Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic vision-use image providing method including all the recitations of independent claim 23.

Dependent claims 4 and 6-9 are also patentably distinguishable over Takemoto and Imaizumi at least because each dependent claim includes all the recitations of independent claim 23.

Appellants, therefore, respectfully solicit reversal of the clearly erroneous rejection of independent claim 23, as well as dependent claims 4 and 6-9, under 35 U.S.C. § 103(a) over the combination of Takemoto and Imaizumi.

Independent Claim 24

Claim 24 is an independent claim and reproduced as follows:

24. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

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means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, display-manner information indicating in what manner the selected two dimensional images are to be displayed, and order of alignment information specifying a direction of aligning the selected two dimensional images;

means for selecting the specified two or more two-dimensional images according to an order-of-priority to be given to the selected two or more of the two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information; and

means for displaying the selected two-dimensional images according to the display manner information and the alignment information.

Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display apparatus including all the recitations of independent claim 24.

In the statement of the rejection, the Examiner asserted as follows:

Regarding claim 24 (currently amended), the rejection and rationale applied to claim 22 has been incorporated here. Takemoto et al further teach: and order of alignment information specifying a direction of aligning the selected two dimensional images [p0265, p0282-p0285 (Proper order and reverse order are considered as order of alignment. Order of alignment is given to those viewpoint images which have display manner (2D/3D already defined).

Appellants respectfully disagree.

Takemoto and Imaizumi, do not disclose or suggest, among other things, "the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information; and means for displaying the selected two-dimensional images according to the display manner information and the alignment information," recited in independent claim 23.

As discussed above, Takemoto teaches distributing images with information with respect to three-dimensional display processes, and Imaizumi describes compressing and decompressing a plurality of two-dimensional images based on view point ranking.

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In more detail, Takemoto in paragraph [0045] teaches that "a compressing unit... compresses the parallax image, and a transmitting unit which transmits a plurality of the compressed parallax images with different viewpoints to the terminal." As mentioned above, Imaizumi teaches compressing and decompressing images based on the view point ranking. If the teachings of Imaizumi were applied to Takemoto, **the ranking would be used for compressing and decompressing images to be prepared by Takemoto**. Thus, **the modified Takemoto's system does not teach using the order-of-priority information for displaying two-dimensional images**.

Accordingly, to arrive at the claimed subject matter, the combination of Takemoto and Imaizumi need to be further modified, i.e., Imaizumi's ranking is applied for displaying two-dimensional images. **Further modification of the combination of Takemoto and Imaizumi is required to make the combination of Takemoto and Imaizumi operable and to attempt to arrive at the claimed subject matter**. This results in a strong indication of a hindsight reconstruction of the claimed subject matter based on the use of Appellants' disclosure as a template.

It is noted that the order-of-priority information indicates order assigned to two-dimensional images to prioritize them in accordance with an intention of a creator who creates stereoscopic images (perceived by a viewer) based on those two-dimensional images.

Based on the foregoing, Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display apparatus including all the recitations of independent claim 24.

Dependent claims 14, 15, and 21 are also patentably distinguishable over Takemoto and Imaizumi at least because each dependent claim includes all the recitations of independent claim 24.

Appellants, therefore, respectfully solicit reversal of the clearly erroneous rejection of independent claim 24, as well as dependent claims 14, 15, and 21 under 35 U.S.C. § 103(a) over the combination of Takemoto and Imaizumi.

Independent Claim 25

Claim 25 is an independent claim and reproduced as follows:

25. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding view point-number information, order-of-priority information indicating an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the corresponding viewpoint-number information in the attached information, and display-manner information indicating in what manner the selected two dimensional images are to be displayed;

means for selecting the specified two-dimensional images based on the order-of-priority information; and

means for displaying the selected two-dimensional images according to the display manner information, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional images.

Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display including all the recitations of independent claim 26. Specifically, the applied combination of the references does not teach, among other things, the following recitations of the claim:

means for selecting the specified two-dimensional images based on the order-of-priority information; and

means for displaying the selected two-dimensional images according to the display manner information, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional images.

In the Office Action, the Examiner simply stated that "**[c]laim 25 (currently amended)** has been analyzed and rejected with regard to claims 22 and 26" (the first full paragraph on page 9 of the Office Action) (emphasis in original). Appellants respectfully disagree because neither Takemoto nor Imaizumi teaches "selecting the specified two-dimensional images based on the order-of-priority information" and "displaying the selected two-dimensional images according to the display manner information."

Appellants emphasize that the Examiner made a clear error in applying the teachings of Imaizumi to Takemoto. Takemoto teaches distributing images with information with respect to three-dimensional display processes. Imaizumi describes compressing and decompressing a plurality of two-dimensional images based on view point ranking.

In more detail, Takemoto in paragraph [0045] teaches that "a compressing unit... compresses the parallax image, and a transmitting unit which transmits a plurality of the compressed parallax images with different viewpoints to the terminal." As mentioned above, Imaizumi teaches compressing and decompressing images based on the view point ranking. If the teachings of Imaizumi were applied to Takemoto, **the ranking would be used for compressing and decompressing images to be prepared by Takemoto**. Thus, **the modified Takemoto's system does not teach means for selecting using the order-of-priority information for displaying two-dimensional images**. The modified Takemoto's system uses the ranking for predictive coding (*see* paragraph [0012]).

Accordingly, to arrive at the claimed subject matter, the combination of Takemoto and Imaizumi need to be further modified, *i.e.*, Imaizumi's ranking is applied for displaying two-

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dimensional images. **Further modification of the combination of Takemoto and Imaizumi is required to make the combination of Takemoto and Imaizumi operable and to attempt to arrive at the claimed subject matter**. This results in a strong indication of a hindsight reconstruction of the claimed subject matter based on the use of Appellants' disclosure as a template.

It is noted that the order-of-priority information indicates order assigned to two-dimensional images to prioritize them in accordance with an intention of a creator who creates stereoscopic images (perceived by a viewer) based on those two-dimensional images.

Based on the foregoing, Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display apparatus including all the recitations of independent claim 25.

Dependent claims 14, 15, and 21 are also patentably distinguishable over Takemoto and Imaizumi at least because each dependent claim includes all the recitations of independent claim 25.

Appellants, therefore, respectfully solicit reversal of the clearly erroneous rejection of independent claim 25, as well as dependent claims 14, 15, and 21, under 35 U.S.C. § 103(a) over the combination of Takemoto and Imaizumi.

Independent Claim 26

Claim 26 is an independent claim and reproduced as follows:

26. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, order-of-priority information indicating an order-of-priority to be given to the selected two or more of the two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached

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information, and purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used; and

means for selecting the specified two-dimensional images based on the order-of-priority information, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional image data.

Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display including all the recitations of independent claim 26. Specifically, the applied combination of the references does not teach, among other things, the following recitations of the claim:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, order-of-priority information indicating an order-of-priority to be given to the selected two or more of the two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information, and purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used; and

means for selecting the specified two-dimensional images based on the order-of-priority information, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional image data

In the Office Action, the Examiner stated as follows (the paragraph bridging pages 9 and 10 of the Office Action):

Claim 26 (currently amended) has been analyzed and rejected with regard to claim 27 and in accordance with Takemoto et al's further teaching on: …; and the order-of-priority information specifies order of the two or more two-dimensional image data selected based on the purpose-of-use information [p0141-p0147 (Whether an image is used as 2D, 3D; ….)].

First, Appellants point out that the Examiner's position is inconsistent with the other claims because in the above-cited paragraph of the Office Action, the Examiner stated that Takemoto teaches

the claimed order-of-priority information. On the other than, with respect to claim 27, for example, the Examiner admitted that "Takemoto et al do not explicitly define order-of-priority information for each viewpoint" (the paragraph bridging pages 7 and 8 of the Office Action) (emphasis added). Claim 26 recites "order-of-priority information indicating an order-of-priority to be given to the selected two or more of the two-dimensional images [of different viewpoints]."

Second, Appellants stress that the Examiner made a clear error in applying the teachings of Imaizumi to Takemoto. Takemoto teaches distributing images with information with respect to three-dimensional display processes. Imaizumi describes compressing and decompressing a plurality of two-dimensional images based on view point ranking.

In more detail, Takemoto in paragraph [0045] teaches that "a compressing unit... compresses the parallax image, and a transmitting unit which transmits a plurality of the compressed parallax images with different viewpoints to the terminal." As mentioned above, Imaizumi teaches compressing and decompressing images based on the view point ranking. If the teachings of Imaizumi were applied to Takemoto, **the ranking would be used for compressing and decompressing images to be prepared by Takemoto**. Thus, **the modified Takemoto's system does not teach means for selecting using the order-of-priority information for displaying two-dimensional images**. The modified Takemoto's system uses the ranking for predictive coding (*see* paragraph [0012]).

Accordingly, to arrive at the claimed subject matter, the combination of Takemoto and Imaizumi need to be further modified, *i.e.*, Imaizumi's ranking is applied for displaying two-dimensional images. **Further modification of the combination of Takemoto and Imaizumi is required to make the combination of Takemoto and Imaizumi operable and to attempt to arrive at the claimed subject matter**. This results in a strong indication of a hindsight reconstruction of the claimed subject matter based on the use of Appellants' disclosure as a template.

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It is noted that the order-of-priority information indicates order assigned to two-dimensional images to prioritize them in accordance with an intention of a creator who creates stereoscopic images (perceived by a viewer) based on those two-dimensional images.

Based on the foregoing, Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display apparatus including all the recitations of independent claim 26.

Appellants, therefore, respectfully solicit reversal of the clearly erroneous rejection of independent claim 26 under 35 U.S.C. § 103(a) over the combination of Takemoto and Imaizumi.

Independent Claim 27

Claim 27 is an independent claim and reproduced as follows:

27. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used, and order of alignment information specifying a direction of aligning the selected two-dimensional images; and

means for selecting the specified two-dimensional images according to an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information.

Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display including all the recitations of independent claim 27. Specifically, the applied combination of the references does not teach, among other things, "means for selecting the specified two-dimensional images according to an order-of-priority to be given to the selected two-

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dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information," as recited in claim 27.

In the Office Action, the Examiner admitted that "Takemoto et al do not explicitly define order-of-priority information for each viewpoint." However, the Examiner asserted that Imaizumi teaches the "means for selecting the specific two-dimensional images according to an order-of-priority...." The paragraph bridging pages 7 and 8 of the Office Action. Appellants respectfully disagree.

The Examiner made a clear error in applying the teachings of Imaizumi to Takemoto. Takemoto teaches distributing images with information with respect to three-dimensional display processes. Imaizumi describes compressing and decompressing a plurality of two-dimensional images based on view point ranking.

In more detail, Takemoto in paragraph [0045] teaches that "a compressing unit... compresses the parallax image, and a transmitting unit which transmits a plurality of the compressed parallax images with different viewpoints to the terminal." As mentioned above, Imaizumi teaches compressing and decompressing images based on the view point ranking. If the teachings of Imaizumi were applied to Takemoto, **the ranking would be used for compressing and decompressing images to be prepared by Takemoto**. Thus, **the modified Takemoto's system does not teach means for selecting using the order-of-priority information for displaying two-dimensional images**. The modified Takemoto's system uses the ranking for predictive coding (*see* paragraph [0012]).

Accordingly, to arrive at the claimed subject matter, the combination of Takemoto and Imaizumi need to be further modified, *i.e.*, Imaizumi's ranking is applied for displaying two-dimensional images. **Further modification of the combination of Takemoto and Imaizumi is required to make the combination of Takemoto and Imaizumi operable and to attempt to arrive**

at the claimed subject matter. This results in a strong indication of a hindsight reconstruction of the claimed subject matter based on the use of Appellants' disclosure as a template.

Further, it is apparent that Imaizumi does not teach, among other things, "the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information," recited in claim 27. For example, the recitation is exemplarily described in the paragraph bridging pages 14-15 of the specification which is reproduced below (emphasis added):

> In the above example, as shown in FIG. 3, information in which the viewpoint-number information as information for selecting two or more two-dimensional images are arranged in order of priority is set as the attached information within the file header. In addition, in the example shown in FIG. 3, the viewpoint-number information as the information for selecting the two-dimensional images are (3,0) and (4,0). In this case, (3,0) is written first, and (4,0) is written after that, which means that a first order of priority is given to (3,0), and a second order of priority is given to (4,0). By doing so, when providing as data the plurality of two-dimensional images of different viewpoints as stereoscopic vision-use images, attached information composed of the viewpoint-number information allotted to each two-dimensional image data, and the information formed by arranging in order of priority the viewpoint-number information as the information for selecting two or more two-dimensional images, together with two-dimensional image data, is to be provided.

Imaizumi is silent on the recitation "the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information." Accordingly, Imaizumi does not cure the deficiencies of Takemoto.

It is noted that the order-of-priority information indicates order assigned to two-dimensional images to prioritize them in accordance with an intention of a creator who creates stereoscopic images (perceived by a viewer) based on those two-dimensional images.

Based on the foregoing, Takemoto and Imaizumi, individually or in combination, do not disclose or suggest a stereoscopic image display apparatus including all the recitations of independent claim 27.

Appellants, therefore, respectfully solicit reversal of the clearly erroneous rejection of claim 27 under 35 U.S.C. § 103(a) over the combination of Takemoto and Imaizumi.

Conclusion

For all of the foregoing reason, Appellant respectfully submits that the grounds of rejection of the claims on appeal is in error and should be reversed.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP
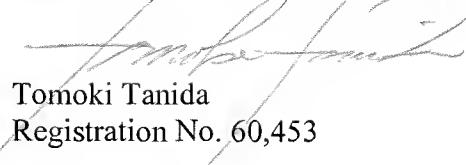
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CLAIMS APPENDIX

4. A stereoscopic vision-use image providing method according to claim 22 or 23, wherein the attached information further includes information for indicating whether or not the plurality of two-dimensional images are an endless series of two-dimensional images in which any two adjacent viewpoint, including the images at each end of the series, are continuous.

6. A stereoscopic vision-use image providing method according to claim 22 or 23, wherein the attached information further includes purpose-of-use information indicating for what purposes the selected two-dimensional images is to be used.

7. A stereoscopic vision-use image providing method according to claim 6, wherein an alignment of bits and contents of purposes of use correspond to each other, and in addition, "0", and "1" of each bit mean validity/invalidity of each purpose of use.

8. A stereoscopic vision-use image providing method according to claim 22 or 23, wherein the attached information further includes information indicating what description formats are adopted as a description format of the information.

9. A stereoscopic vision-use image providing method according to claim 22 or 23, wherein the attached information is provided by any one of broadcasting, communicating, or recording into a recording medium.

14. A stereoscopic image display apparatus according to claim 24 or 25, wherein the process which is not a primary stereoscopic vision-use image process is a process for displaying on a screen one or a plurality of the two-dimensional images by applying thereto a reduction-in-size process in order to show contents of the plurality of the two-dimensional images of different viewpoints.

15. A stereoscopic image display apparatus according to claim 24 or 25, wherein the process is a process for selecting, out of the plurality of two-dimensional images of different viewpoints, one or a plurality of the two-dimensional images for use of at least one of a print-out and an image delivery.

21. A stereoscopic image display apparatus according to claim 24 or 25, comprising means for obtaining, from the attached information, information indicating what description formats as a description format of the information is adopted, wherein,

in a case of being capable of obtaining the information, a content of the attached information is recognized based on the description format indicated in the information.

22. A stereoscopic vision-use image providing method for providing two dimensional image data including a plurality of two-dimensional images of different viewpoints for use as stereoscopic vision-use images, the method comprising the steps of:

providing, by a computer, the two-dimensional image data; and

attaching, by the computer, information to the two-dimensional image data, the attached information including:

viewpoint-number information allotted to each two-dimensional image, or information for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for

two-dimensional image areas corresponding to the respective two-dimensional images,

selecting two or more of the two-dimensional images being made by specifying corresponding

viewpoint-number information;

order-of-priority information indicating an order-of-priority to be given to the selected

two-dimensional images, the order-of-priority being determined by order of specifying the

viewpoint-number information in the attached information; and

display-manner information indicating in what manner the selected two-dimensional

images are to be displayed, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional

images.

23. A stereoscopic vision-use image providing method for providing two-dimensional image

data including a plurality of two-dimensional images of different viewpoints for use as stereoscopic

vision-use images, the method comprising the steps of:

providing, by a computer, the two-dimensional image data; and

attaching, by the computer, information to the two-dimensional image data, the attached

information including:

viewpoint-number information allotted to each two-dimensional image, or information

for obtaining, by an arithmetic calculation on a receiver side, viewpoint-number information for

two-dimensional image areas corresponding to the respective two-dimensional images,

selecting two or more of the two-dimensional images being made by specifying corresponding

viewpoint-number information, and the selected two or more of the two dimensional images

being arranged in order of priority which is determined by order of specifying the viewpoint information in the attached information; and

display-manner information indicating in what manner the selected two-dimensional images are to be displayed, wherein

the specified viewpoint-number information is arranged in order of priority to specify order of the selected two or more two-dimensional images.

24. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, display-manner information indicating in what manner the selected two dimensional images are to be displayed, and order of alignment information specifying a direction of aligning the selected two dimensional images;

means for selecting the specified two or more two-dimensional images according to an order-of-priority to be given to the selected two or more of the two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information; and

means for displaying the selected two-dimensional images according to the display manner information and the alignment information .

25. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding view point-number information, order-of-priority information indicating an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the corresponding viewpoint-number information in the attached information, and display-manner information indicating in what manner the selected two dimensional images are to be displayed;

means for selecting the specified two-dimensional images based on the order-of-priority information; and

means for displaying the selected two-dimensional images according to the display manner information, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional images.

26. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, order-of-priority information indicating an

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order-of-priority to be given to the selected two or more of the two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information, and purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used; and

means for selecting the specified two-dimensional images based on the order-of-priority information, wherein

the order-of-priority information specifies order of the selected two or more two-dimensional image data.

27. A stereoscopic image display apparatus for creating stereoscopic vision-use images based on two-dimensional image data including a plurality of two-dimensional images of different viewpoints, comprising:

means for obtaining, from information attached to the two-dimensional image data, viewpoint-number information of each two-dimensional image, selecting two-dimensional images being made by specifying corresponding viewpoint-number information, purpose-of-use information indicating for what purposes the selected two-dimensional images are to be used, and order of alignment information specifying a direction of aligning the selected two-dimensional images; and

means for selecting the specified two-dimensional images according to an order-of-priority to be given to the selected two-dimensional images, the order-of-priority being determined by order of specifying the viewpoint-number information in the attached information.

EVIDENCE APPENDIX

No evidence has been submitted of record under 35 CFR 1.130, 1.131, or 1.132.

<u>RELATED PROCEEDINGS APPENDIX</u>

No decisions have been rendered in Related Appeals or Interferences. Although Notices of Appeal were filed twice for the present application, no decision by the Board of Patent Appeals and Interferences were rendered.